

Abstract of the Disclosure

Methods and apparatus for making an anastomotic connection between a first conduit and a second conduit. A connector structure having a first end portion and a second end portion is positioned about a balloon catheter, which when pressurized, expands to a significant extent at the distal end thereof. The balloon enlarges the connector structure when positioned at the distal end portion of the balloon to create the anastomosis, and at the same time reduces the axial length of the connector, thereby compressing the first conduit to the second conduit, creating a hemodynamic seal and a firm attachment of the two conduits. After enlargement, the connector structure remains in place and adds structure to the anastomosis. During introduction, the second end portion of the connector is covered by a nosecone assembly to prevent trauma to the second conduit while the apparatus is being introduced. The nosecone assembly has a flexible structure which may change configuration to expose the second set of members after insertion into the second conduit and to allow removal of the nosecone after deployment.